

Title (en)

REFRIGERATION DEVICES INCLUDING TEMPERATURE-CONTROLLED CONTAINER SYSTEMS

Title (de)

KÜHLVORRICHTUNGEN MIT TEMPERATURGESTEUERTEN CONTAINERSYSTEMEN

Title (fr)

DISPOSITIFS DE RÉFRIGÉRATION COMPRENANT DES SYSTÈMES DE CONTENANT À RÉGULATION DE TEMPÉRATURE

Publication

EP 3074703 A4 20170719 (EN)

Application

EP 14865524 A 20141125

Priority

- US 201314091831 A 20131127
- US 201414484969 A 20140912
- US 2014067275 W 20141125

Abstract (en)

[origin: US2015143831A1] In some embodiments, a refrigeration device includes: walls substantially forming a liquid-impermeable container configured to hold phase change material internal to the refrigeration device; at least one active refrigeration unit including a set of evaporator coils positioned at least partially within the liquid-impermeable container; a unidirectional thermal conductor with a condensing end and an evaporative end, the condensing end positioned within the liquid-impermeable container; a first aperture in the liquid-impermeable container, the first aperture of a size, shape and position to permit the set of evaporator coils to traverse the aperture; a second aperture in the liquid-impermeable container, the second aperture including an internal surface of a size, shape and position to mate with an external surface of the unidirectional thermal conductor; and one or more walls substantially forming a storage region in thermal contact with the evaporative end of the unidirectional thermal conductor.

IPC 8 full level

F25D 23/06 (2006.01); **F25B 39/02** (2006.01); **F25D 29/00** (2006.01)

CPC (source: EP KR US)

F25B 23/006 (2013.01 - EP KR US); **F25B 39/02** (2013.01 - KR); **F25D 11/006** (2013.01 - KR); **F25D 11/025** (2013.01 - EP KR US);
F25D 29/00 (2013.01 - KR); **F28D 15/0275** (2013.01 - KR); **F28F 3/14** (2013.01 - EP KR US); **F25B 2500/01** (2013.01 - EP KR US);
F25D 11/006 (2013.01 - EP US); **F25D 2700/12** (2013.01 - KR); **F28F 2210/02** (2013.01 - EP KR US); **F28F 2255/18** (2013.01 - EP KR US)

Citation (search report)

- [A] US 2009049845 A1 20090226 - MCSTRAVICK DAVID [US], et al
- [A] WO 9950604 A1 19991007 - GUO CHEN [CN], et al
- [A] US 6308518 B1 20011030 - HUNTER RICK C [US]
- See references of WO 2015081058A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 2015143831 A1 20150528; US 9726418 B2 20170808; CN 106461313 A 20170222; CN 106461313 B 20190419; EP 3074703 A1 20161005;
EP 3074703 A4 20170719; EP 3074703 B1 20200722; HU E052084 T2 20210428; JP 2016538521 A 20161208; JP 6788502 B2 20201125;
KR 102261804 B1 20210608; KR 20160128989 A 20161108; WO 2015081058 A1 20150604; ZA 201604269 B 20190925

DOCDB simple family (application)

US 201414484969 A 20140912; CN 201480070513 A 20141125; EP 14865524 A 20141125; HU E14865524 A 20141125;
JP 2016534925 A 20141125; KR 20167017215 A 20141125; US 2014067275 W 20141125; ZA 201604269 A 20160623